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MG Devereux
Oregon State Parks and Recreation Department
725 Summer St NE, Ste C
Salem, Oregon 97301-1266

Denise Hoffert-Hay
Calapooia Watershed Council
2006 Chase Loop SW
Albany, Oregon 97321

Dear MG and Denise:

The NOAA Restoration Center (RC) has recently awarded funds to the Sodom Dam and Shearer Dam Removal projects through the Community-based Restoration Program. This federal funding constitutes a federal nexus under the Endangered Species Act (ESA). Under section 7 of the ESA, consultation with NOAA Fisheries is required for any federal action that could affect ESA-listed marine species or their habitats. In addition, consultation is required under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) for any federal action that could affect designated Essential Fish Habitat (EFH) for coho, pink and chinook salmon, groundfish, and coastal pelagic species.

In October of 2009, the NOAA Restoration Center Northwest Programmatic Biological Opinion was issued by the Northwest Region of NOAA Fisheries. This Opinion concludes that the restoration activities most commonly implemented with RC funding are not likely to jeopardize ESA-listed salmonid species in the Pacific Northwest. The Opinion provides non-discretionary terms and conditions intended to minimize the potential for incidental take of listed species. The document also includes measures intended to avoid and minimize potential impacts on EFH, and satisfies the consultation requirement for eligible activities under the MSA. The document can be viewed in its entirety at:

https://pcts.nmfs.noaa.gov/pls/pcts-pub/pcts_upload.summary_list_biop?p_id=107963

Your project has been reviewed by RC staff, and we have determined that the proposed activities removal of Sodom and Shearer dams and associated restoration actions are eligible for inclusion under the Biological Opinion. This means that if you follow the terms and conditions and meet the requirements outlined in this letter, you will satisfy the ESA/EFH consultation obligation for the RC-funded portion of your project. Please note that ESA/EFH coverage under this Biological Opinion does not satisfy any other federal, state or local laws or permit requirements.

Your obligations under the programmatic Biological Opinion are as follows:

- 1) As the responsible project managers, you must ensure that the terms and conditions attached to this letter are followed, in their entirety, as applicable to your project. If you do not understand any of the terms and conditions, or believe that they cannot be implemented for any reason, you must contact RC staff immediately and obtain guidance.

- 2) If before or during project implementation you become aware of new information or unforeseen circumstances such that the project cannot be completed according to the scope of effects or the terms and conditions in the Opinion, you must inform RC staff. You must stop all project operations, except for efforts to avoid or minimize resource damage, pending completion of an individual consultation on the project.
- 3) If at any time during or after project implementation you identify a sick, injured or dead specimen of a threatened or endangered species, you must notify NMFS Office of Law Enforcement at (503) 231-6240 or (206) 526-6133. The finder must take care in handling of sick or injured specimens to ensure effective treatment, and in handling dead specimens to preserve biological material in the best possible condition for later analysis of cause of death. The finder also has the responsibility to carry out instructions provided by the Office of Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed unnecessarily.
- 4) Within 10 days of completing a capture and release action, you must submit a complete Salvage Reporting Form to your NOAA RC technical monitor. An electronic template for this report will be provided to you by your technical monitor.
- 5) Within 60 days of completing all work below ordinary high water, you must provide an action completion report that describes your success in meeting the conservation measures, reasonable and prudent measures, and associated terms and conditions of the Opinion. An electronic template for this report will be provided to you by your technical monitor.

The following conservation measures and terms and conditions are applicable to your project. These sections of the Biological Opinion are enclosed with this letter.

- General construction
- Fish passage restoration
- Streambank restoration
- Water control structure removal

Once you have read, understood and made provisions to implement these measures, you are authorized to proceed with your project. If you have questions or need additional information, please contact Megan Hilgart of my staff at 503.231.6848.

Sincerely,



Jennifer Steger
Northwest and Alaska Regional Supervisor, NOAA Restoration Center

Enclosures (1): Terms and Conditions

Cc: FERC Secretary Bose and service list; Michele Hanson, USACE (by email)

General Construction

Terms and Conditions:

- 1. *Flagging sensitive areas.*** The action area will be flagged to identify sensitive resource areas, such as the extent of herbicide buffers, areas below ordinary high water, and wetlands.
- 2. *Temporary erosion controls.*** Temporary erosion controls will be in place before any significant alteration of the action site.
- 3. *Temporary access roads.*** Existing ways will be used whenever possible. Temporary access roads will not be built on slopes greater than 50%. Soil disturbance and compaction will be minimized within 150 feet of a natural waterbody or wetland. All temporary access roads will be obliterated when the action is completed, the soil will be stabilized, and the site will be revegetated. Temporary roads in wet or flooded areas will be restored by the end of the applicable in-water work period.
- 4. *Fish passage.*** Fish passage will be provided for any adult or juvenile fish likely to be present in the action area during construction, unless passage did not exist before construction or the stream is dry at the time of construction. After construction, adult and juvenile passage that meets NMFS' fish passage criteria (NMFS 2008, or most recent version) will be provided for the life of the action.
- 5. *In-water work period.*** All work within the wetted channel, including any herbicide application, will be completed during the periods of time specified for that watershed to protect key fish and wildlife species.¹ Hydraulic and topographic measurements as part of a restoration action may be completed at any time, provided that the affected area is not occupied by adult fish congregating for spawning or an area where redds are occupied by eggs or pre-emergent alevins.
- 6. *Work area isolation.*** Any work area within the wetted channel will be completely isolated from the active stream whenever ESA-listed fish are reasonably certain to be present, or if the work area is 300 feet or less upstream from spawning habitats, except for large wood restoration actions. A work area isolation plan is required for these actions and will include the following information:
 - (a) Contact information of an experienced and knowledgeable fishery biologist that will be responsible for accomplishing each component of the plan;
 - (b) an estimate of stream flows likely to occur during isolation;
 - (c) a plan view of all isolation elements and fish release areas;
 - (d) a list of equipment and materials necessary to complete the plan, including a fish screen that meets NMFS fish screen criteria for any pump used to dewater the isolation area;
 - (e) and the sequence and schedule of dewatering and rewatering activities.
- 7. *Capture and release.*** Any fish that may be trapped within the isolated work area will be captured and released using a trap, seine, electrofishing, or other methods as prudent to minimize the risk of injury, then released at a safe release site. Capture and release will be supervised by a

fishery biologist experienced with work area isolation and competent to ensure the safe handling of all fish.

8. *Electrofishing.* If electrofishing will be used to capture fish for salvage NMFS' electrofishing guidelines will be followed (NMFS 2000). Those guidelines are available from the NMFS Northwest Region, Protected Resources Division, Portland, Oregon.

9. *Construction water.* Surface water may be diverted to meet construction needs, but only if developed sources are unavailable or inadequate. Diversions will not exceed 10% of the available flow .

10. *Fish screens.* Fish screens for surface water that is diverted by gravity or by pumping at a rate that exceeds 3 cfs will be submitted to NMFS for review and approval. All other diversions will have a fish screen that meets the following specifications: (a) An automated cleaning device with a minimum effective surface area of 2.5 square feet per cfs, and a nominal maximum approach velocity of 0.4 feet per second (fps), or no automated cleaning device, a minimum effective surface area of 1 square foot per cfs, and a nominal maximum approach rate of 0.2 fps; and (b) a round or square screen mesh that is no larger than 2.38 mm (0.094") in the narrow dimension, or any other shape that is no larger than 1.75 mm (0.069") in the narrow dimension. Each fish screen will be installed, operated, and maintained according to NMFS' fish screen criteria (NMFS 2008, or most recent version).

11. *Erosion and pollution control plan.* A erosion and pollution control plan will be prepared and carried out, commensurate with the scope of the action, that includes the following information: (a) The name, phone number, an address of the person responsible for accomplishing the plan; (b) best management practices to confine vegetation and soil disturbance to the minimum area, and minimum length of time, as necessary to complete the action, and otherwise prevent or minimize erosion associated with the action, including ensuring that sediment will be removed from erosion controls once it has reached 1/3 of the exposed height of the control; (c) best management practices to confine, remove, and dispose of construction waste, including every type of debris, discharge water, concrete, cement, grout, washout facility, welding slag, petroleum product, or other hazardous materials generated, used, or stored on-site; (d) procedures to contain and control a spill of any hazardous material generated, used or stored on-site, including notification of proper authorities; and (e) steps to cease work under high flows, except for efforts to avoid or minimize resource damage.

12. *Pollution and erosion control inspections.* The applicant will complete and record the following water quality observations to ensure that the in-water work area is not contributing visible pollution to water: (a) Take a turbidity sample using an appropriately and regularly calibrated turbidimeter, or a visual turbidity observation, every four hours when work is being completed, or more often as necessary to ensure that the in-water work area is not contributing visible sediment to water, at a relatively undisturbed area approximately 100 feet upstream from the project area, or 300 feet from the project area if subject to tidal or coastal scour. Record the observation, location, and time before monitoring at the downstream point. (b) Take a second visual observation, immediately after each upstream observation, approximately 50 feet upstream from the project area in streams that are 30 feet wide or less, 100 feet from the project area for

streams between 30 and 100 feet wide, 200 feet from the discharge point or nonpoint source for streams greater than 100 feet wide, and 300 feet from the discharge point or nonpoint source for areas subject to tidal or coastal scour. Record the downstream observation, location, and time.

(c) Compare the upstream and downstream observations - if more turbidity or pollutants are visible downstream than upstream, the activity must be modified to reduce pollution and continue to monitor every four hours, or more often as necessary. (d) If the exceedance continues after the second monitoring interval, the activity must stop until the pollutant level returns to background. (e) If monitoring or inspections show that the pollution controls are ineffective, immediately mobilize work crews to repair, replace, or reinforce controls as necessary.

13. Choice of equipment. Heavy equipment will be selected and operated in a manner that minimizes adverse effects to the environment (e.g., minimally-sized, low pressure tires, minimal hard turn paths for tracked vehicles, temporary mats or plates within wet areas or sensitive soils).

14. Vehicle staging and use. All vehicles and other heavy equipment will (a) be stored, fueled, and maintained in a vehicle staging area placed 150 feet or more from any natural waterbody or wetland; (b) inspected daily for fluid leaks before leaving the vehicle staging area for operation within 50 feet of any natural waterbody or wetland; (c) steam cleaned before operation below ordinary high water, and as often as necessary during operation, to remain grease free.

15. Stationary power equipment. Generators, cranes, and any other stationary equipment operated within 150 feet of any natural or wetland will be maintained as necessary to prevent leaks and spills from entering the water.

16. Work from top of bank. To the extent feasible, heavy equipment will work from the top of the bank, unless work from another location would result in less habitat disturbance.

17. Site restoration. Any large wood, native vegetation, topsoil, and native channel material displaced by construction will be stockpiled for use during site restoration. When construction is finished, all streambanks, soils, and vegetation will be cleaned up and restored as necessary to renew ecosystem processes that form and maintain productive fish habitats. Fencing will be installed as necessary to prevent access to revegetated sites by livestock or unauthorized persons.

1. In Oregon these times are listed in the Oregon Guidelines for Timing of In-water Work to Protect Fish and Wildlife Resources (ODFW 2008, or the most recent version), except that the winter work window is not approved for actions in the Willamette River below Willamette Falls. In-water work periods for actions in Washington state will be obtained from NMFS in Lacey, Washington, and for actions in Idaho state, the in-water work period will be obtained from NMFS in Boise, Idaho.

Fish Passage Restoration

Terms and Conditions:

1. Boulder weir and fish ladder review and approval. Projects that involve the installation, maintenance, or improvement of a boulder weir or fish ladder must be reviewed and approved by NMFS for consistency with NMFS' fish passage criteria (NMFS 2008, or most recent version).

2. Culvert removal and replacement. Culverts may be completely removed or replaced with bridges, structural arches, bottomless culverts, and embedded pipes that allow for a full stream simulation design. Hydraulic designs, culverts with external fishways, and baffled culverts are not proposed in this action. All culvert replacement projects will be designed using approved stream simulation methods (NMFS 2008, or most recent version). Structure width will be 1.5 times the active channel width¹ or the entire flood prone area if the stream channel is incised or lacks a functional floodplain. Incised channels are defined as those with entrenchment ratios (flood prone width/bankfull channel width) of less than 1.4.

1. Active channel width means the stream width measured perpendicular to stream flow between the ordinary high water lines, or at the channel bankfull elevation if the ordinary high water lines are indeterminate. This width includes the cumulative active channel width of all individual side- and off-channel components of channels with braided and meandering forms, and measure outside the area influence of any existing stream crossing, e.g., five to seven channel widths upstream and downstream.

Streambank Restoration

Terms and Conditions:

1. Streambank shaping. Without changing the location of the bank toe, NOAARC will restore damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation. This may include sloping of unconsolidated bank material to a stable angle of repose, or the use of benches in consolidated, cohesive soils. The purpose of bank shaping is to provide a more stable platform for the establishment of riparian vegetation, while also reducing the depth to the water table, thus promoting better plant survival.

2. Soil reinforcement. NOAARC will complete all soil reinforcement earthwork and excavation in the dry. Use soil layers or lifts that are strengthened with biodegradable fabrics and penetrable by plant roots.

3. Large Wood. NOAARC will include large wood in each streambank restoration action to the maximum extent feasible. Large wood must be intact, hard, and undecayed to partly decaying, and should have untrimmed root wads to provide functional refugia habitat for fish. Use of decayed or fragmented wood found lying on the ground or partially sunken in the ground is not acceptable. Wood that is already within the stream or suspended over the stream may be repositioned to allow for greater interaction with the stream.

4. Use of Rock in Streambank Restoration. Rock will not be used for streambank restoration, except as ballast to stabilize large wood.

5. Planting or installing vegetation. NOAARC will use a diverse assemblage of species native to the action area or region, including trees, shrubs, and herbaceous species. Do not use noxious or invasive species.

6. Fertilizer. NOAARC will not apply surface fertilizer within 50 feet of any streamchannel.

7. Fencing. NOAARC will install fencing as necessary to prevent access to revegetated sites by livestock or unauthorized persons.

*For additional information on methods and design for bank shaping; installation of coir logs and soil reinforcements; anchoring and placement of large wood; woody plantings; and herbaceous cover, see WDFW and Inter-Fluve (2006), and "riparian restoration and management" in WDFW *et al.* (2004).

Water Control Structure Removal

Terms and Conditions:

1. Water control structure removal. This action includes removal of water control structures, including small dams, channel-spanning weirs, subsurface drainage features, tide gates, or instream flow redirection structures. Any instream water control structure that is greater than 16.4 feet high, may impound contaminated sediment, acts as grade control and may initiate a head-cut upstream if removed are not proposed. Data requirements and analysis for structure removal include:

(a) A longitudinal profile of the stream channel thalweg for 20 channel widths upstream and downstream of the structure shall be used to determine the potential for channel degradation;

(b) a minimum of three cross-sections – one downstream of the structure, one through the reservoir area upstream of the structure, and one upstream of the reservoir area outside of the influence of the structure) to characterize the channel morphology and quantify the stored sediment;

(c) sediment characterization to determine the proportion of coarse sediment (>2mm) in the reservoir area;

(d) a survey of any downstream spawning areas that may be affected by sediment released by removal of the water control structure. Reservoirs with a d₃₅ greater than 2 mm (*i.e.*, 65% of the sediment by weight exceeds 2 mm in diameter) may be removed without excavation of stored material, if the sediment contains no contaminants; reservoirs with a d₃₅ less than 2 mm (*i.e.*, 65% of the sediment by weight is less than 2 mm in diameter) will require partial removal of the fine sediment to create a pilot channel, in conjunction with stabilization of the newly exposed streambanks with native vegetation.